

even answers p. 506

$$2) \frac{x^2 e^{2x}}{2} - \frac{x e^{2x}}{2} + \frac{e^{2x}}{4} + C$$

$$6) -\frac{x}{e^x} - \frac{1}{e^x} + C$$

$$20) -\frac{\ln(2x) + 1}{x} + C$$

$$22) \frac{2}{3} x^2 (x-1)^{3/2} - \frac{8}{15} x (x-1)^{5/2} + \frac{16}{105} (x-1)^{7/2} + C$$

$$26) x^2 \sin x + 2x \cos x - 2 \sin x + C$$

HW Questions:

$$20) \int \frac{\ln(2x)}{x^2} dx$$

$$u = \ln(2x) \quad dv = x^{-2}$$

$$du = \frac{1}{2x} \cdot 2 dx \quad v = -x^{-1}$$

$$-\frac{\ln(2x)}{x} + \int \frac{1}{x} \cdot \frac{1}{x} dx$$

=

$$\int u \cdot dv$$

$$uv - \int v du$$

Individual Quiz # 2

Tuesday, June 5

Euler's Method

Integration by parts

Separation of variables to find a particular solution to a differential equation.

Arc Length

Classwork: Green WS

Using separation of variables to write a particular solution to a differential equation given an initial condition

Classwork answers:

$$1) y = -\sqrt{6x - x^2 + 16} \quad 2) y = \frac{4}{x^2 + 1}$$

HW: more 9.2 practice,  
Integration by Parts

p. 506, # 24, 27, 35, 36,  
38, 39, 62

even answers follow...

even answers:

$$24) \frac{2}{27} (2 + 3x)^{1/2} (3x - 4) + C$$

$$36) \frac{\pi}{4} - \frac{1}{2}$$

$$38) e - 2$$

$$62) A = -\frac{2}{e} + 1$$